

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claim 1 (Previously Presented) A heart valve leaflet fastener comprising at least one pair of arms, the pair being sized and adapted for fastening two adjacent heart valve leaflets, wherein the arms pivot from one orientation to a gripping position with ends of respective paired arms being directed toward each other.

Claim 2 (Previously Presented) The heart valve leaflet fastener of claim 1 wherein the arms flex relative to a core, and wherein the fastener has a gripping position where the pair of arms meet under tension.

Claim 3 (Original) The heart valve leaflet fastener of claim 1 wherein one of the arms of each pair includes a projection for gripping a leaflet.

Claim 4 (Previously Presented) A kit comprising a cardiac catheter, a fastener applicator and a leaflet fastener of claim 1, the cardiac catheter having suitable dimensions for deployment and insertion into a human heart in the vicinity of the mitral or tricuspid valve, the leaflet fastener having a size allowing insertion through the cardiac catheter, the fastener applicator releasably holding the leaflet fastener.

Claim 5 (Original) The kit of claim 4 wherein the paired arms comprise gripping elements that extend toward each other when the fastener is in a gripping position.

Claim 6 (Original) The kit of claim 4 wherein the opposed arms of a pair of arms comprise a pointed tip and a clasp that engage each other in the gripping position.

Claim 7 (Original) The kit of claim 4 wherein the arms flex to a low profile position to fit within the cardiac catheter.

Claim 8 (Original) The kit of claim 4 wherein the fastener applicator comprises a shaft and a sleeve that slides over the shaft and wherein at least one member of the pair of arms slides along the shaft with the sleeve engaging the sliding arms to constrain their movement along the shaft.

Claim 9 (Original) The kit of claim 8 wherein the arms can slide along the shaft between a low profile position for fitting within the cardiac catheter and an extended gripping position for gripping leaflets.

Claim 10 (Original) The kit of claim 4 wherein the arms pivot between a low profile position and an unconstrained extended position.

Claim 11 (Original) The kit of claim 4 wherein the fastener applicator comprises a shaft and a bayonet fastener that releasably holds the leaflet fastener on the shaft.

Claim 12 (Original) The kit of claim 4 wherein the fastener applicator comprises a shaft and a latch that releasably holds the leaflet fastener on the shaft.

Claim 13 (Previously Presented) A device comprising a catheter, a leaflet fastener applicator and a leaflet fastener of claim 1, the catheter having a proximal end, a distal end and suitable dimensions for insertion into a heart, the leaflet fastener applicator passing through the catheter being actuatable from the proximal end of the catheter and a fastening element projecting from the distal end of the catheter, the leaflet fastener applicator releasably holding the leaflet fastener.

Claim 14 (Currently Amended) A heart valve repair instrument comprising a ring and a ring applicator, wherein the ring is releasably attachable to the applicator, the ring comprises two pointed shafts and wherein the applicator can apply a force to the ring to bring the points of the shafts toward each other relative to an initial position, wherein the ring comprises a curved tube extending from one pointed shaft into which the second pointed shaft extends, the ring and applicator having an appropriate size for placement within a chamber of a human heart.

Claim 15 (Canceled)

Claim 16 (Currently Amended) The instrument of claim 14[5] wherein the ring further comprises a spring within the tube between the respective pointed shafts and a

releasable lock that can hold the second pointed shaft within the tube in a locked position and wherein the force applicator can apply a force to release the lock.

Claim 17 (Original) The instrument of claim 14 wherein the two pointed shafts extend from a notch that is a weak point at which the ring can be deformed to direct the pointed shafts toward each other.

Claim 18 (Previously Presented) A heart valve repair instrument comprising a shaft, a cap, a gripper and a flexible rod, wherein the gripper comprises a plurality of arms radiating from a pivot with each arm having a spike, wherein the cap is located distal to the pivot and the pivot is located distal to the shaft, and wherein the flexible rod connects to the cap to provide for movement of the cap relative to the pivot of the gripper and the shaft by pulling the flexible rod, the cap having an opening that can be positioned over the pivot to lock the arms in a closed position.

Claim 19 (Original) The instrument of claim 18 wherein the plurality of arms comprise pairs of arms connected by a resilient web.

Claim 20 (Original) The instrument of claim 18 wherein the pivot is formed from spring metal or memory metal.

Claim 21 (Original) The instrument of claim 20 wherein the plurality of arms comprises two pairs of arms wherein pairs of arms are connected by a resilient web.

Claim 22 (Original) The instrument of claim 21 wherein the web is covered with fabric.

Claim 23 (Original) The instrument of claim 20 wherein the memory metal comprises a nickel alloy.

Claim 24 (Previously Presented) The instrument of claim 20 wherein the memory metal is selected from the group consisting of cobalt-chromium-nickel-molybdenum alloy, MP35N, nickel-titanium alloy, stainless steel and spring metal.

Claim 25 (Original) The instrument of claim 18 wherein the pivot comprises a hinge.

Claim 26 (Original) The instrument of claim 25 wherein the hinge comprises a spring.

Claim 27 (Original) The instrument of claim 18 wherein the arms are biased to an extended position due to expansive forces at the pivot and further comprising strands that connect the shaft with the arms to constrain the extension of the arms.

Claim 28 (Original) The instrument of claim 18 wherein the flexible rod has a disengaging mechanism that releasably connects the cap to the rod.

Claim 29 (Original) The instrument of claim 18 wherein the cap comprises a ridge and the gripper comprise a bump positioned to engage the ridge in the locked position.

Claim 30 (Original) A fastening member comprising a cap and a gripper wherein the gripper comprises a plurality of arms radiating from a pivot with each arm having a spike, wherein the pivot is inserted within an opening in the cap to lock the arms in a collapsed gripping position.

Claim 31 (Original) The fastening member of claim 30 wherein the cap comprises a locking mechanism that engages the gripper to lock the gripper in a locked position.

Claim 32 (Original) The fastening member of claim 30 wherein the cap comprises a slot, and wherein the gripper is held by stops within the slot such that the gripper can slide within the slot to alter the extension of the gripper with the stops preventing separation of the cap and gripper.

Claim 33 (Original) A kit comprising the fastening member of claim 30 and a flexible rod, the flexible rod has a disengaging mechanism that permits the flexible rod to releasably hold the cap.